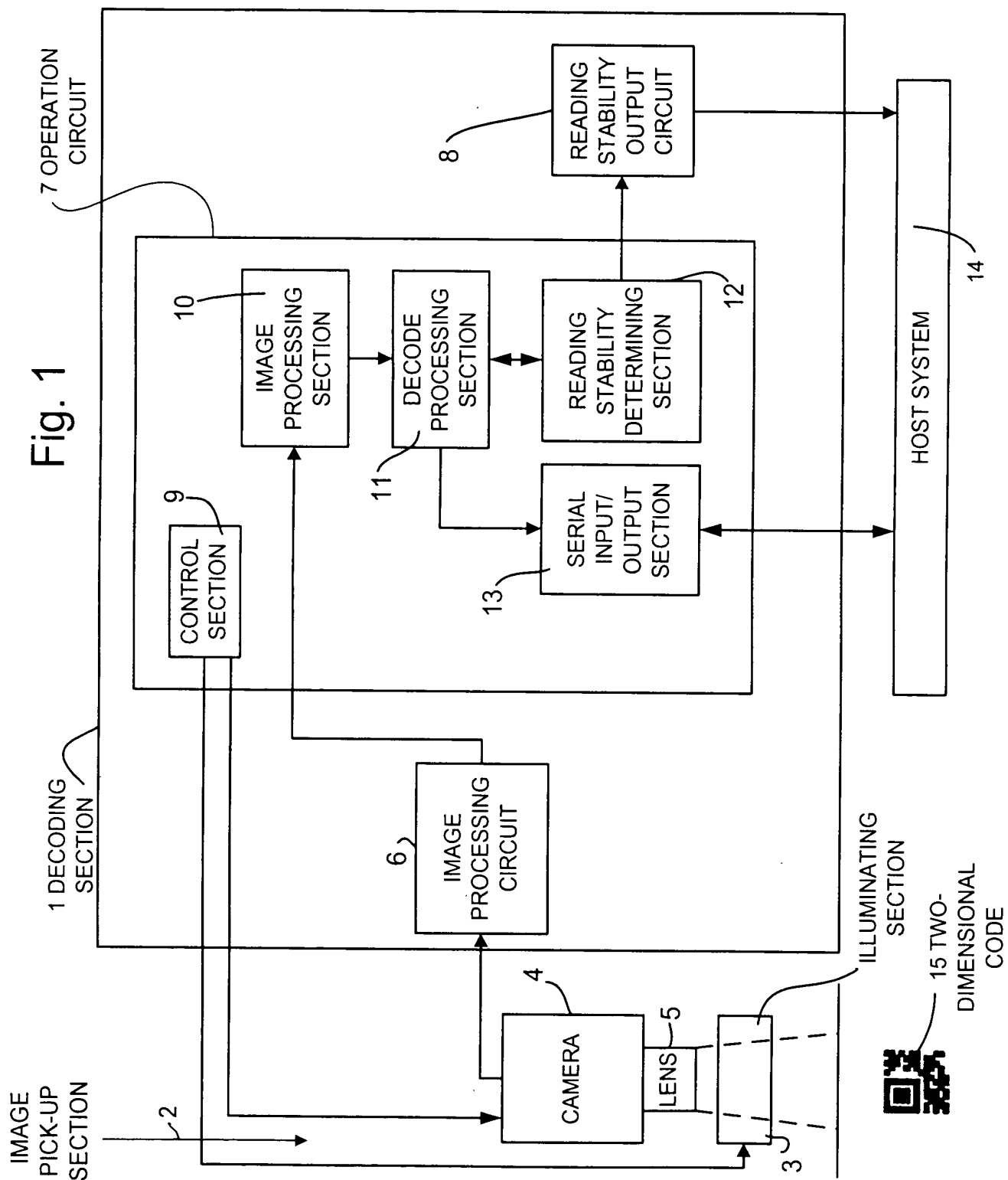


OCT 24 2003



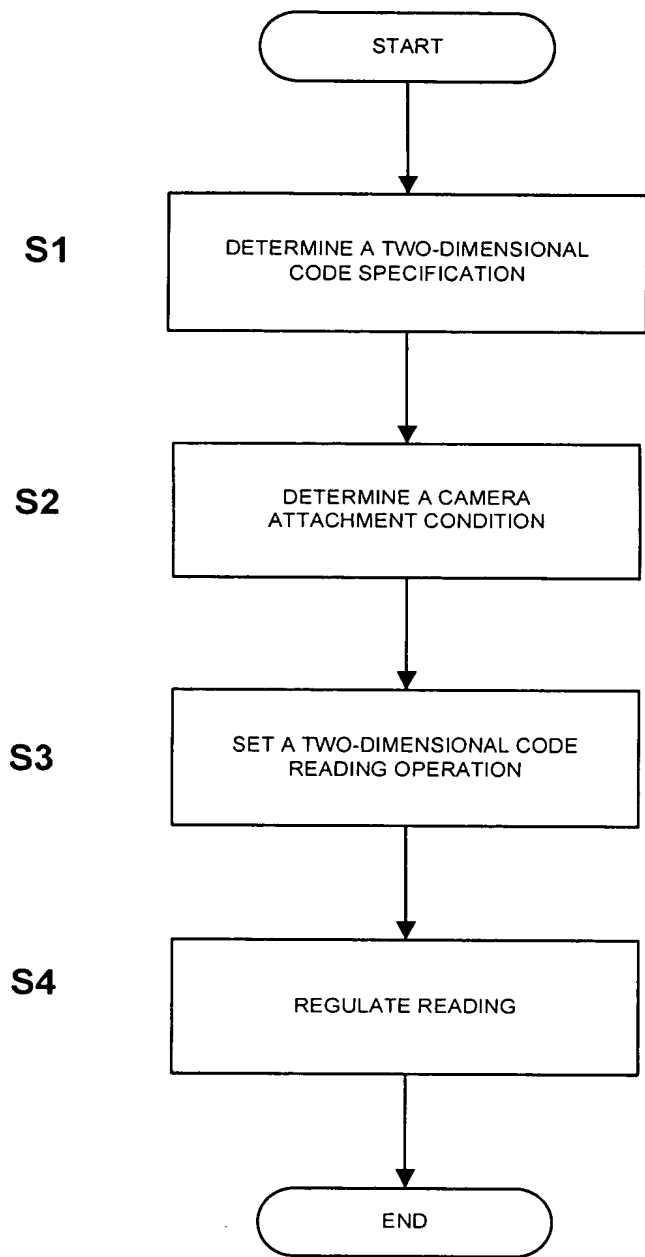
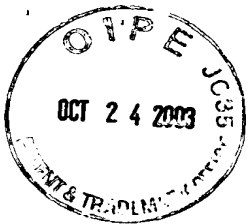


Fig. 2



SETTING SOFTWARE

FILE (F) PC COMMUNICATION SET (C) HELP (H)

DETERMINE 2D CODE SPECIFICATION

DETERMINE 2D CODE SPECIFICATION 16

CODE TYPE

☒ QR CODE ☐ MICRO QR CODE

☐ SQUARE DATA MATRIX ☐ RECTANGULAR DATA MATRIX

DETAILS 17

DATA TYPE 18

☒ NUMERAL ☐ ALPHANUMERIC ☐ BINARY ☐ KANJI

DATA VOLUME: 0 DIGIT 21

PRINTABLE SPACE 22

LENGTH: 0 mm X WIDTH: 0 mm

START CALCULATION 23

CELL SIZE: 0.000mm/ CELL OR LESS 24

SYMBOL SIZE 25

LENGTH: 0.00mm X WIDTH: 0.00mm OR LESS

PRINTING DETAILS

DETERMINE 2D CODE SPECIFICATION

DETERMINE CAMERA ATTACHMENT SYSTEM

SET BODY OPERATION

REGULATE READING

Fig. 3



20

QR CODE DETAILS

X

MODEL

☒ MODEL 1

☐ MODEL 2

ERROR CORRECTION LEVEL

☒ L (7%)

☐ M (15%)

☐ Q (25%)

☐ H (30%)

☐ DOT PATTERN

OK

CANCEL

Fig. 4



Fig. 5

26

SET PRINTING DETAILS

X

DETERMINE CELL SIZE FOR PRINTING
SELECT ROW AND PUSH OKAY

INPUT PRINTING PRECISION IF PRINTING PRECISION IS DIFFERENT FROM THAT OF
YOUR THERMAL PRINTER

CELL SIZE : mm/CELL OR LESS

PRINTING PRECISION:

PRINTING RESOLUTION	DOT NUMBER DOT/CELL	CELL SIZE FOR PRINTING	SYMBOL SIZE FOR PRINTING
200dpi	2	0.254	2.03 x 2.03
200dpi	3	0.381	3.05 x 3.05
200dpi	4	0.508	4.06 x 4.06
200dpi	5	0.635	5.08 x 5.08
200dpi	6	0.762	6.10 x 6.10
200dpi	7	0.889	7.11 x 7.11
200dpi	8	1.016	8.13 x 8.13
200dpi	9	1.143	9.14 x 9.14

OK

CANCEL



SETTING SOFTWARE

FILE (F) PC COMMUNICATION SET (C) HELP (H)

DETERMINE
2
DIMENSIONAL
CODE
SPECIFICATION

DETERMINE
CAMERA
ATTACHMENT
DISTANCE

28

SET
BODY
OPERATION

REGULATE
READING

SET CAMERA ATTACHMENT DISTANCE

TWO-DIMENSIONAL CODE SPECIFICATION

CELL SIZE 0.345 mm

SYMBOL SIZE INCLUDING MARGIN

LENGTH: 10.00 mm x WIDTH: 10.00 mm

31

LABEL SHIFT RANGE

+ 0.00 mm -

ROTATION

PRINTING PATTERN

☒ NORMAL ☐ DOT

ATTACHMENT DISTANCE LIMITATION

☒ NO ☐ YES

0 mm ~ 0 mm

30

ATTACHMENT DISTANCE: 0.000mm

CLOSEUP RING: 0.0mm

36

VISUAL FIELD

LENGTH: 0.00mm X WIDTH: 0.00mm

37

START OF
CALCULATION

35

ATTACHMENT
CONDITION
DETAILS

37

Fig.6



SETTING SOFTWARE

FILE (F) PC COMMUNICATION SET (C) HELP (H)

2D CODE SPECIFICATION

SET CAMERA ATTACHMENT DISTANCE

2D CODE SPECIFICATION

CELL SIZE: 0.00 mm

SYMBOL SIZE

LENGTH: 0.00 mm x WIDTH: 0.00 mm

CALCULATION OF SYMBOL SIZE

POSITIONING PRECISION OF WORK

+ 0 mm ☐ ROTATION

PRINTING PATTERN

☒ NORMAL ☐ DOT

DESIRED ATTACHMENT DISTANCE

☒ NO ☐ YES mm mm

CAMERA ATTACHMENT DISTANCE: 0.00mm

USED CLOSE-UP RING: 0.000mm

FOCUSING RING: 0.000mm

VISUAL FIELD

LENGTH: 0.00mm x WIDTH: 0.00mm

START OF CALCULATION

ATTACHMENT CONDITION DETAILS

28

SET BODY OPERATION

REGULATE READING

Fig.7



Fig. 8

34

CALCULATE SYMBOL SIZE

CALCULATE SYMBOL SIZE FROM CODE TYPE, VERSION (CODE SIZE) AND CELL SIZE.
INQUIRE AT LABEL CREATION SOURCE IF THESE INFORMATION ARE NOT KNOWN.

CODE TYPE

☒ QR CODE ☐ MICRO QR CODE

☐ SQUARE DATA MATRIX ☐ RECTANGULAR DATA MATRIX

VERSION

CELL SIZE : mm

SYMBOL SIZE : ? mm X ? mm

☐ CONNECTED WITH SYMBOL SIZE

OK CANCEL

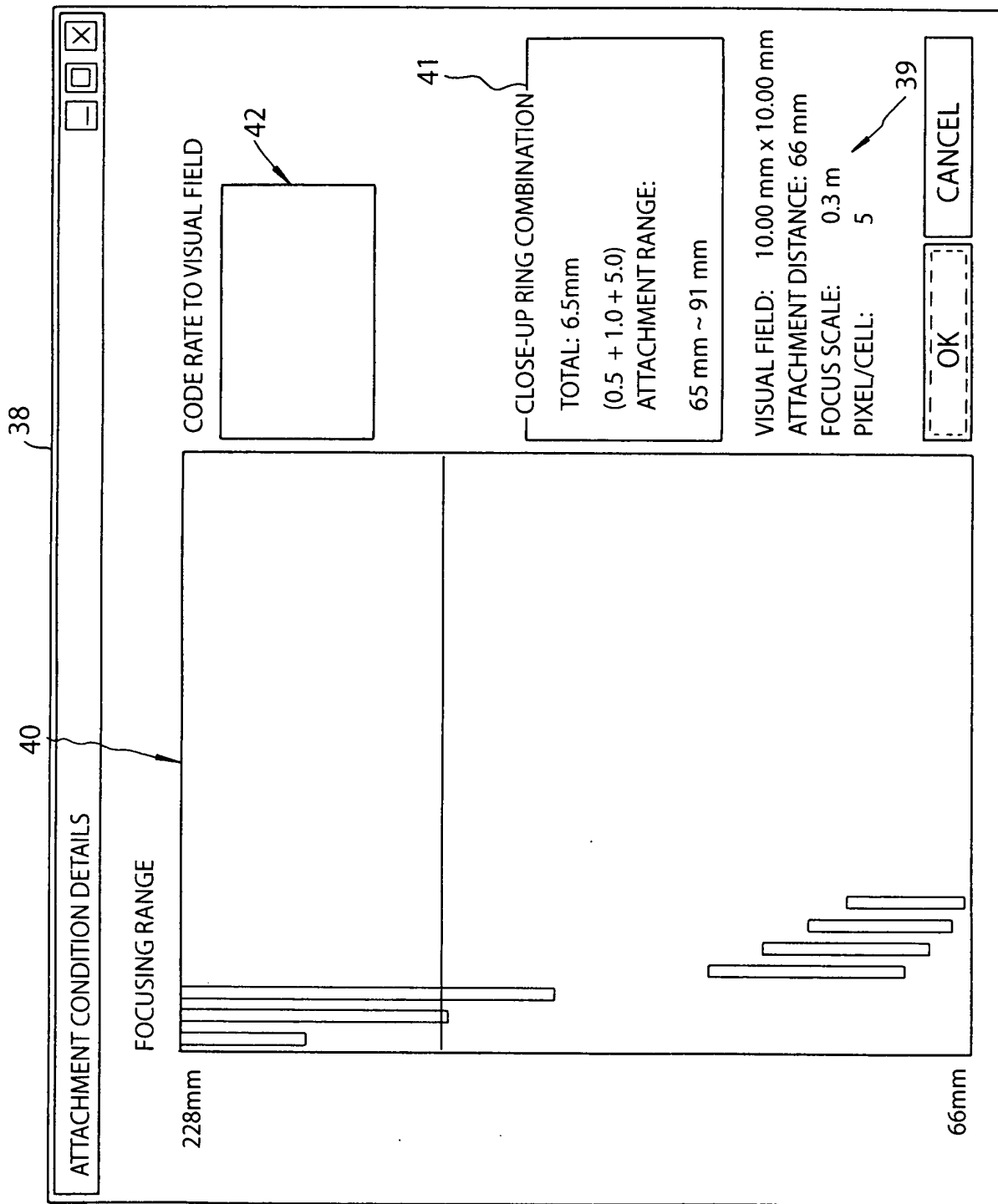
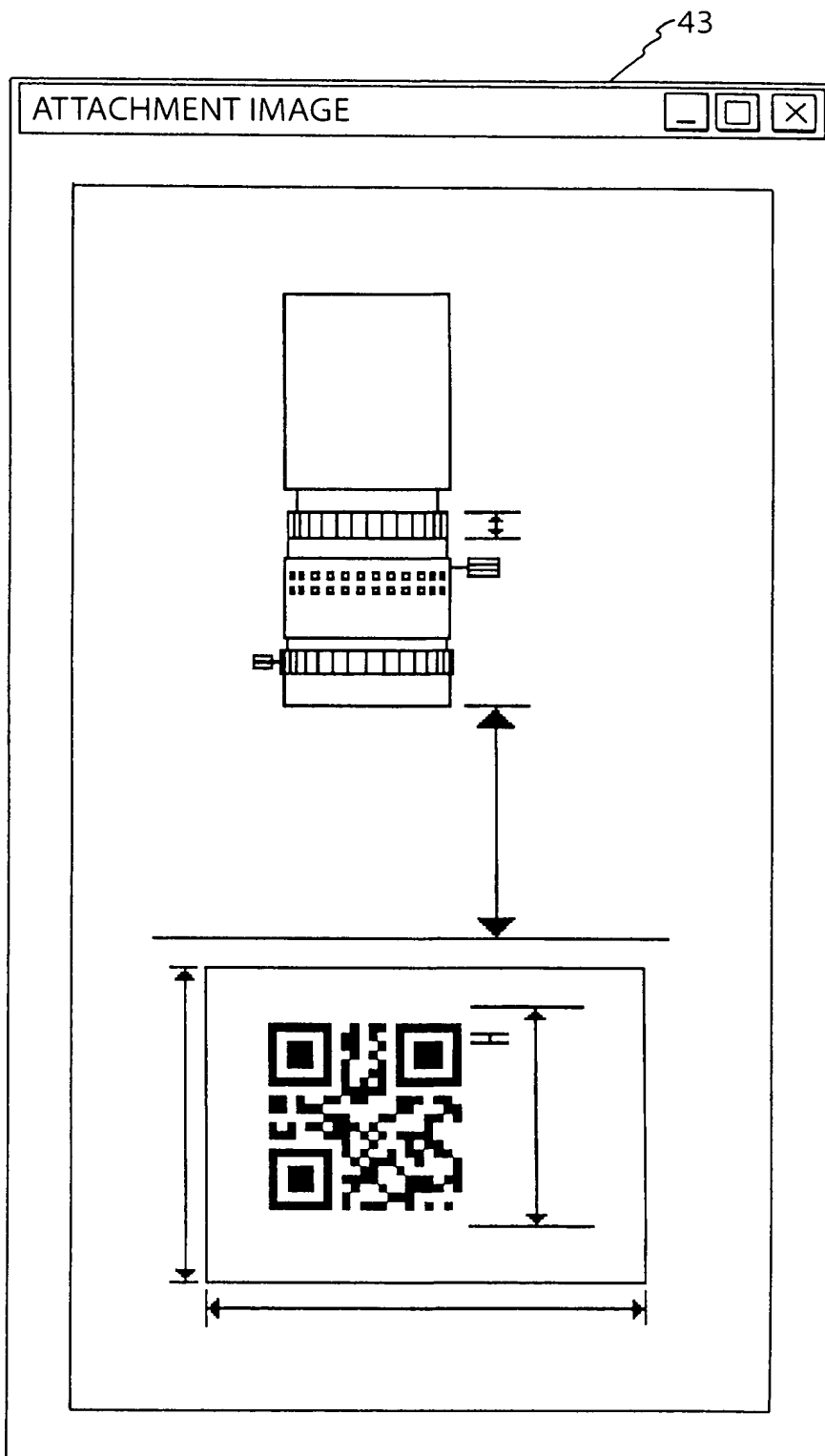


Fig. 9



Fig.10



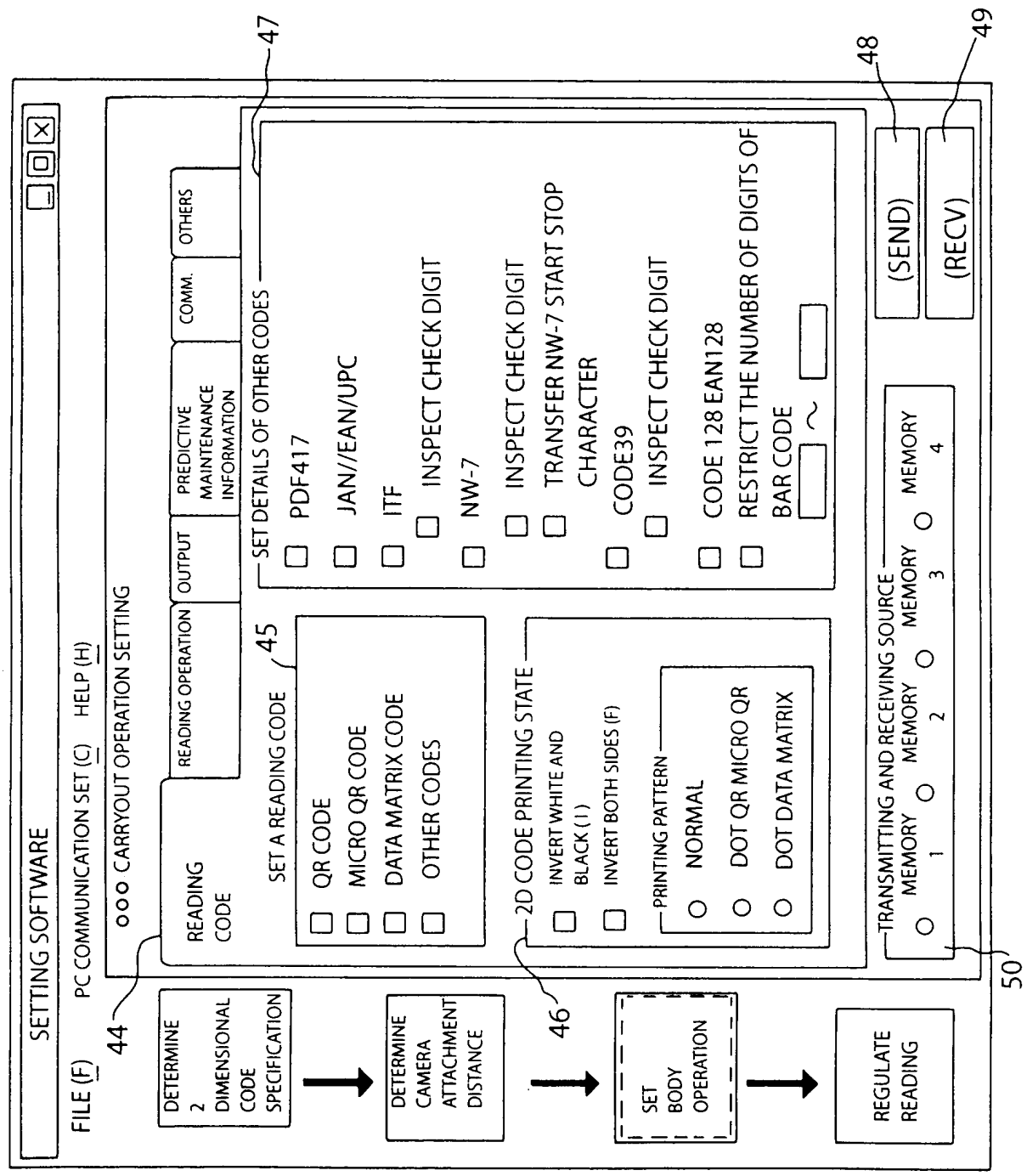


Fig.11



51

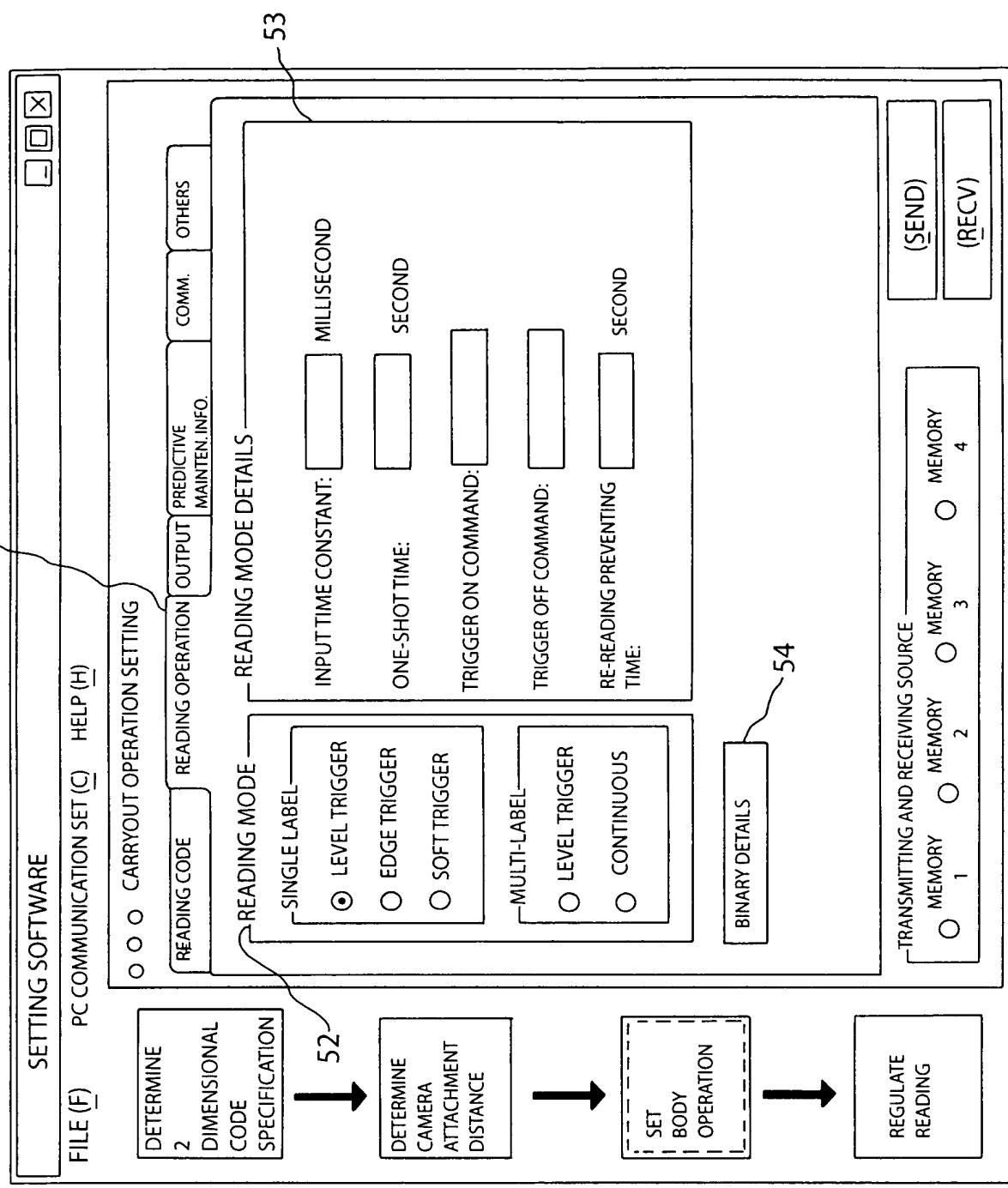


Fig. 12



SETTING SOFTWARE

FILE(F) PC COMMUNICATION SET (C) HELP(H)

DETERMINE
2
DIMENSIONAL
CODE
SPECIFICATION

DETERMINE
CAMERA
ATTACHMENT
DISTANCE

SET
BODY
OPERATION

REGULATE
READING

READING CODE

READING OPERATION

OUTPUT

PREDICTIVE
MAINTENANCE
INFORMATION

COMM.

OTHERS

00 CARRYOUT OPERATION SETTING

OUTPUT TIMING

☒ AFTER READING ☐ AFTER TRIGGER OFF

☒ OK TERMINAL OUTPUT

☒ NG TERMINAL OUTPUT

OUTPUT ON TIME: SECONDS

TERMINAL OUTPUT DELAY TIME: SECONDS

☒ READING ERROR CODE OUTPUT

READING ERROR CODE:

TRANSFER DATA DETAILS

TRANSMITTING AND RECEIVING SOURCE

☐ MEMORY 1 ☐ MEMORY 2 ☐ MEMORY 3 ☐ MEMORY 4

(SEND)

(RECV)

Fig.13

OCT 24 2003

SETTING SOFTWARE

FILE (F) PC COMMUNICATION SET (C) HELP (H)

DETERMINE
2
DIMENSIONAL
CODE
SPECIFICATION

↓

DETERMINE
CAMERA
ATTACHMENT
DISTANCE

↓

SET
BODY
OPERATION

↓

REGULATE
READING

58

READING CODE

READING OPERATION

OUTPUT

PREDICTIVE MAINTEN.
INFORMATION

COMM.

OTHERS

○ ○ ○ CARRYOUT OPERATION SETTING

SET PREDICTIVE MAINTENANCE INFORMATION (PMI). THE PREDICTIVE MAINTENANCE INFORMATION CAN BE OUTPUTTED FROM PM TERMINAL OR CAN BE ADDED TO READ DATA AND SERIALY TRANSFERRED.

☒ PM TERMINAL OUTPUT

PREDICTIVE MAINTENANCE INFORMATION (PMI)

☐ ADD TO READ DATA

PREDICTIVE MAINTENANCE SET
VALUE 1:
PREDICTIVE MAINTENANCE SET
VALUE 2:

TRANSMITTING AND RECEIVING SOURCE

○ MEMORY 1

○ MEMORY 2

○ MEMORY 3

○ MEMORY 4

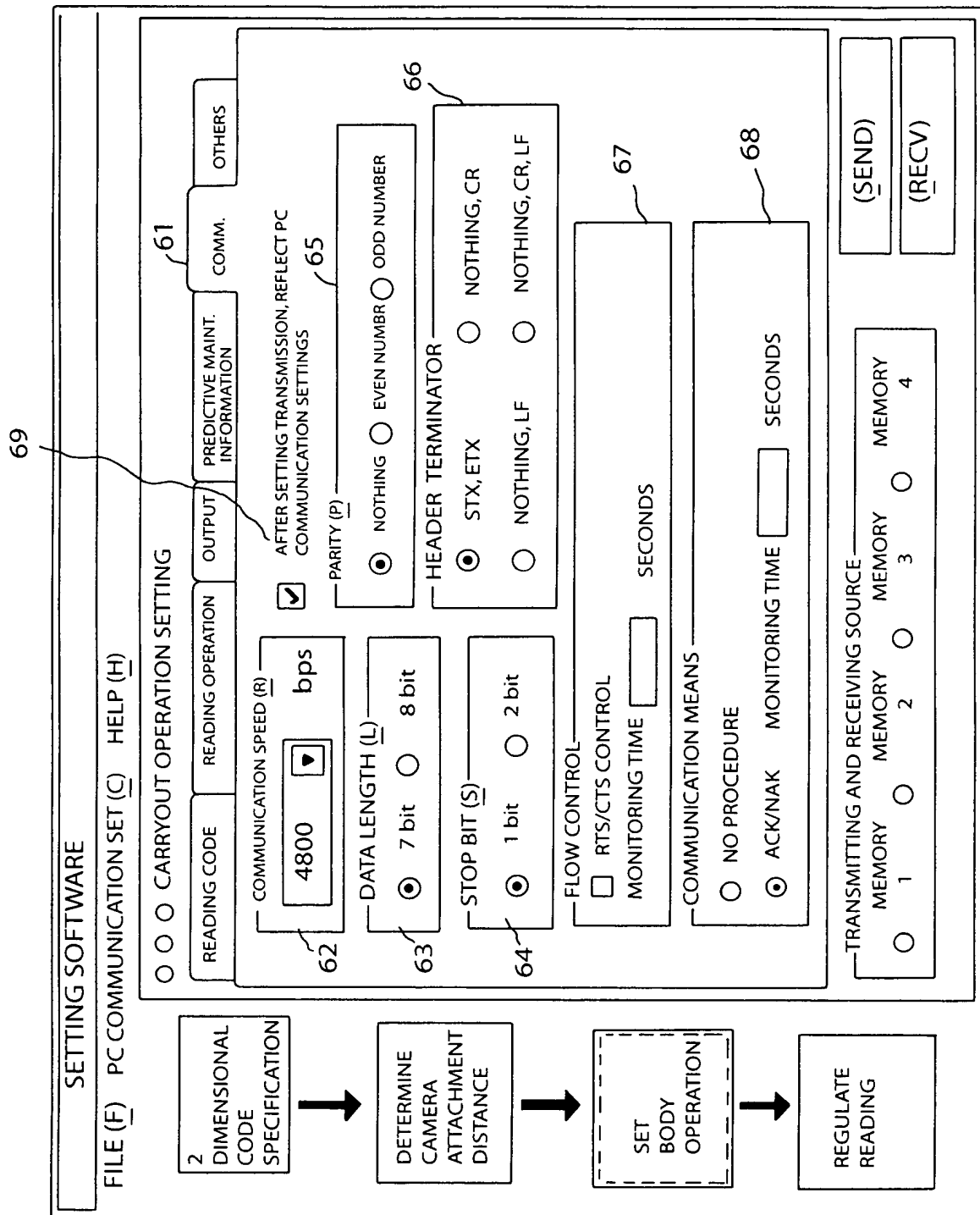
(SEND)

(RECV)

Fig. 14



Fig. 15



PATENT
OCT 24 2003

Fig. 16

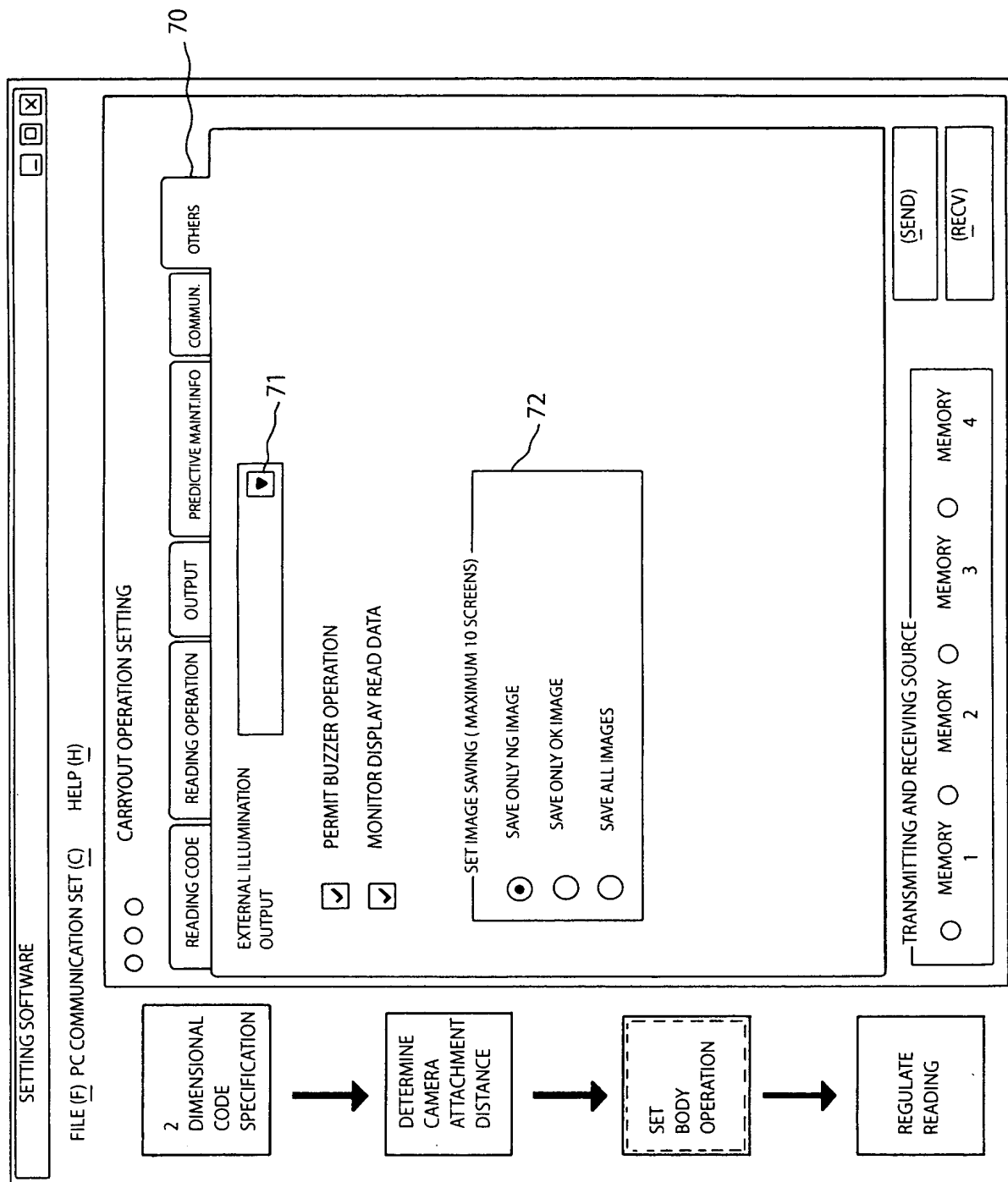
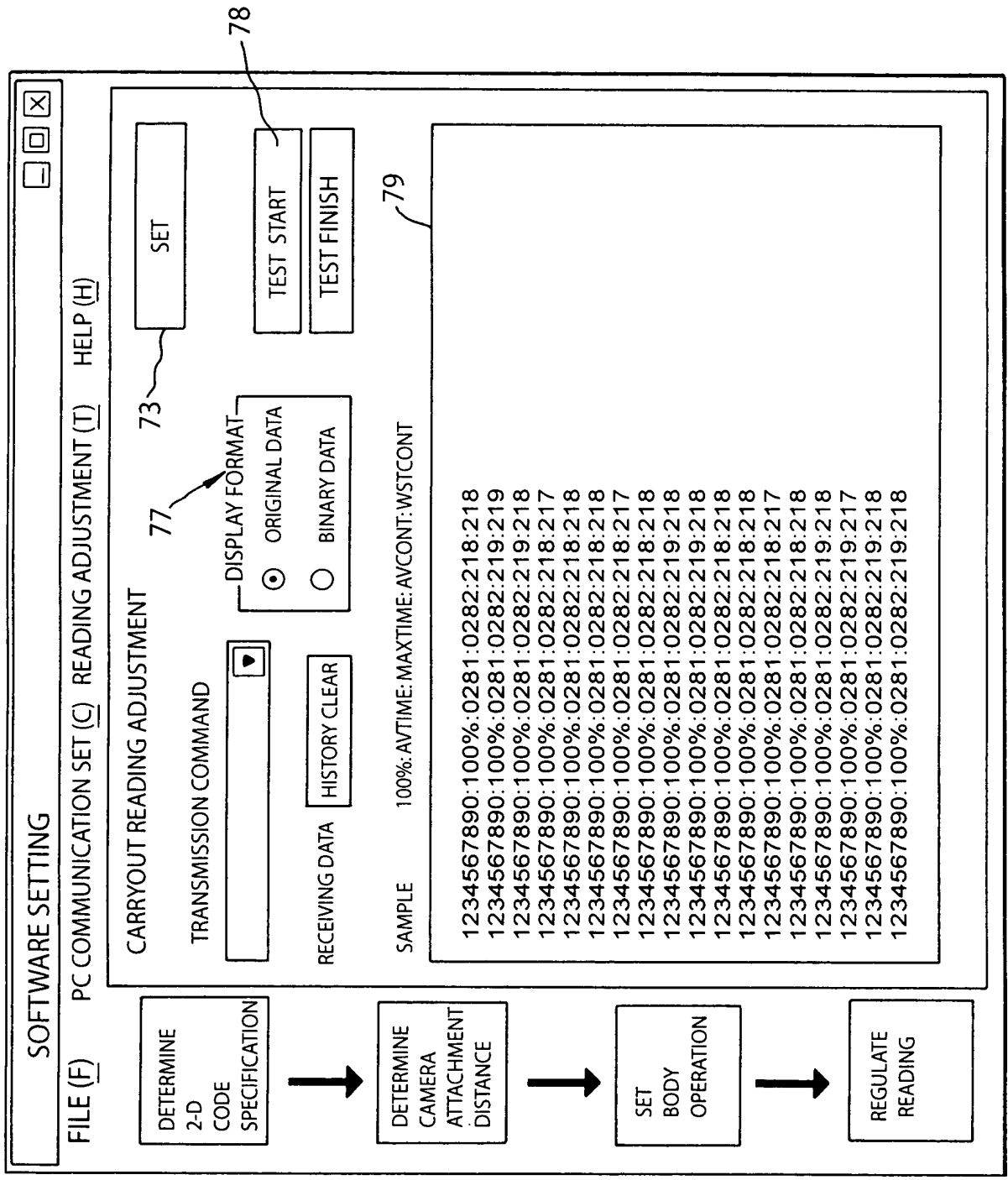
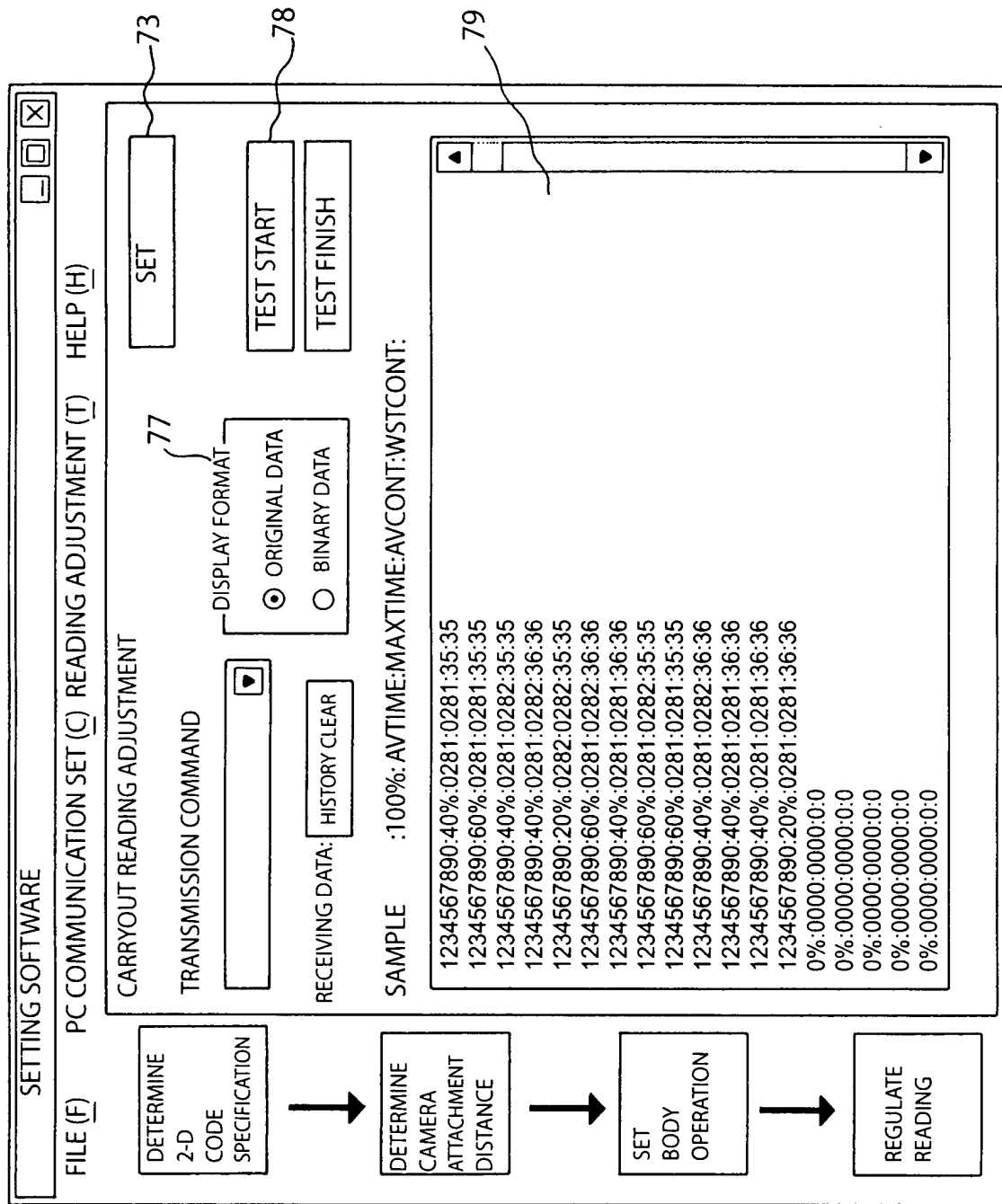


Fig. 17





74

READING TEST SET [X]

DECODING TIME RESTRICTION [9.9] [÷] SECONDS OR LESS

TRIAL NUMBER [10] [÷]

75

DISPLAY DATA

☒ READ DATA ☒ READING RATE

☒ MEAN READING TIME ☒ LONGEST READING TIME

☒ MEAN CONTRAST ☒ LOWEST CONTRAST

76

SAMPLE ○○○ 100%, 0, 0.25, 0.31, 203, 171

OK CANCEL

Fig. 19

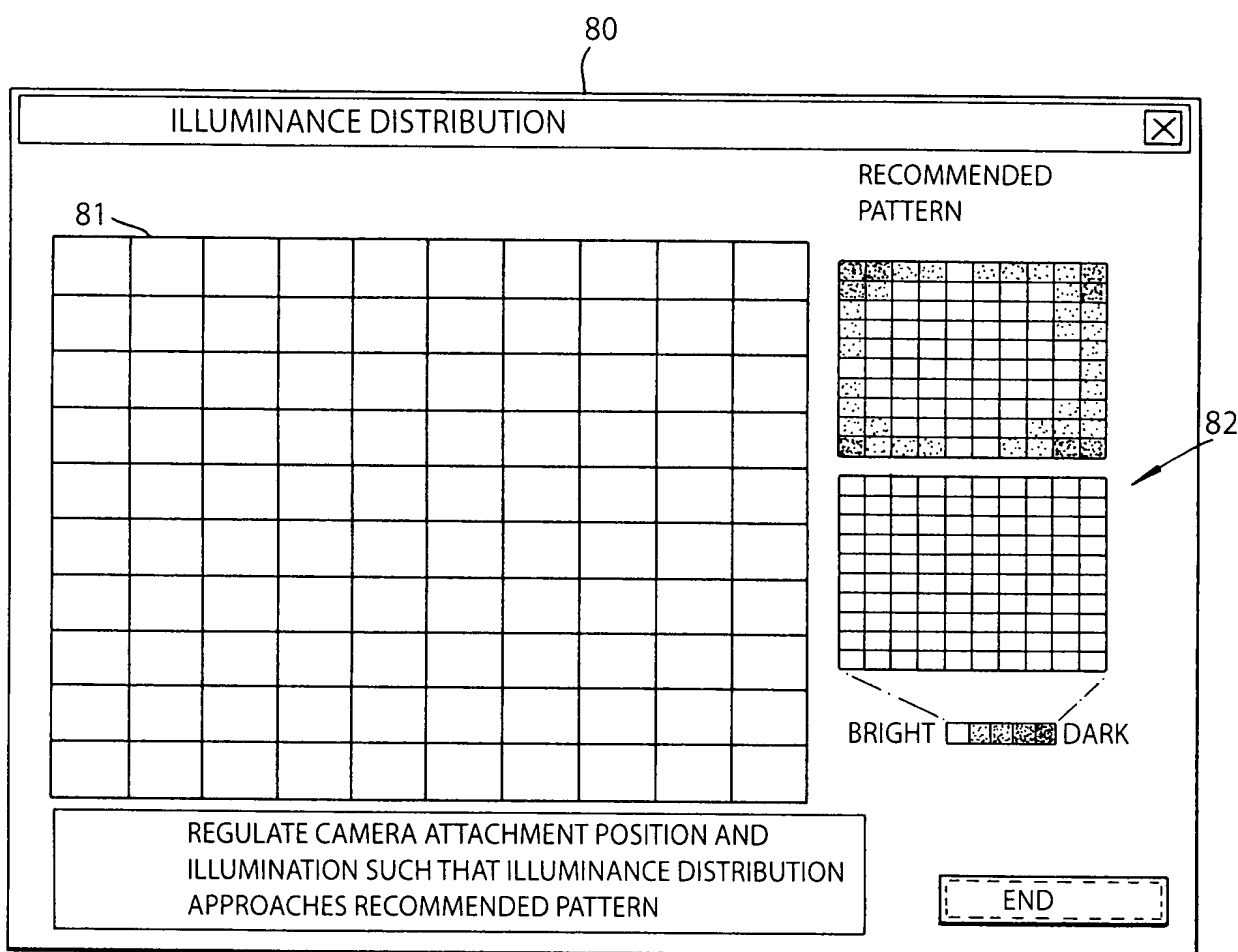


Fig. 20

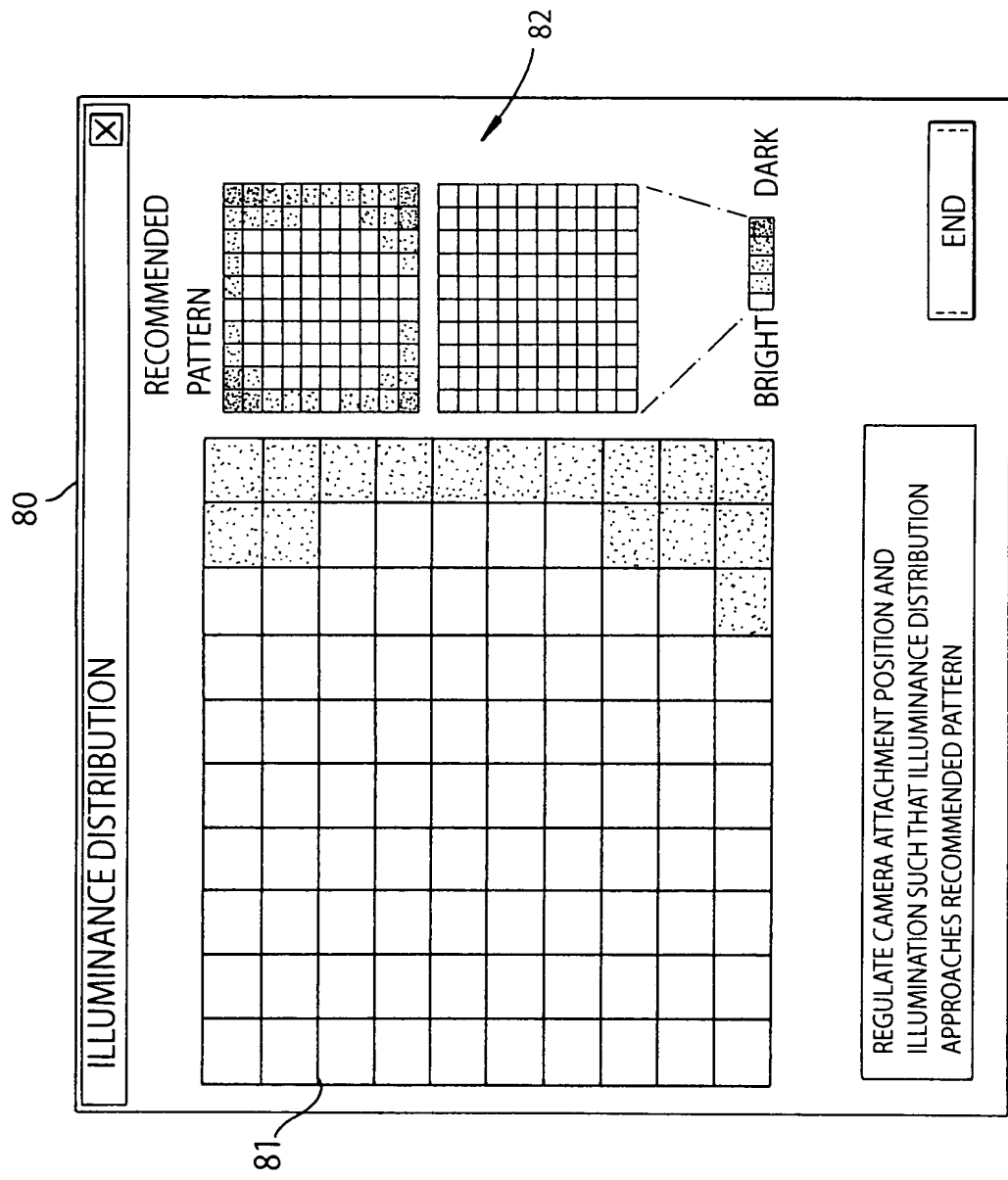


Fig. 21

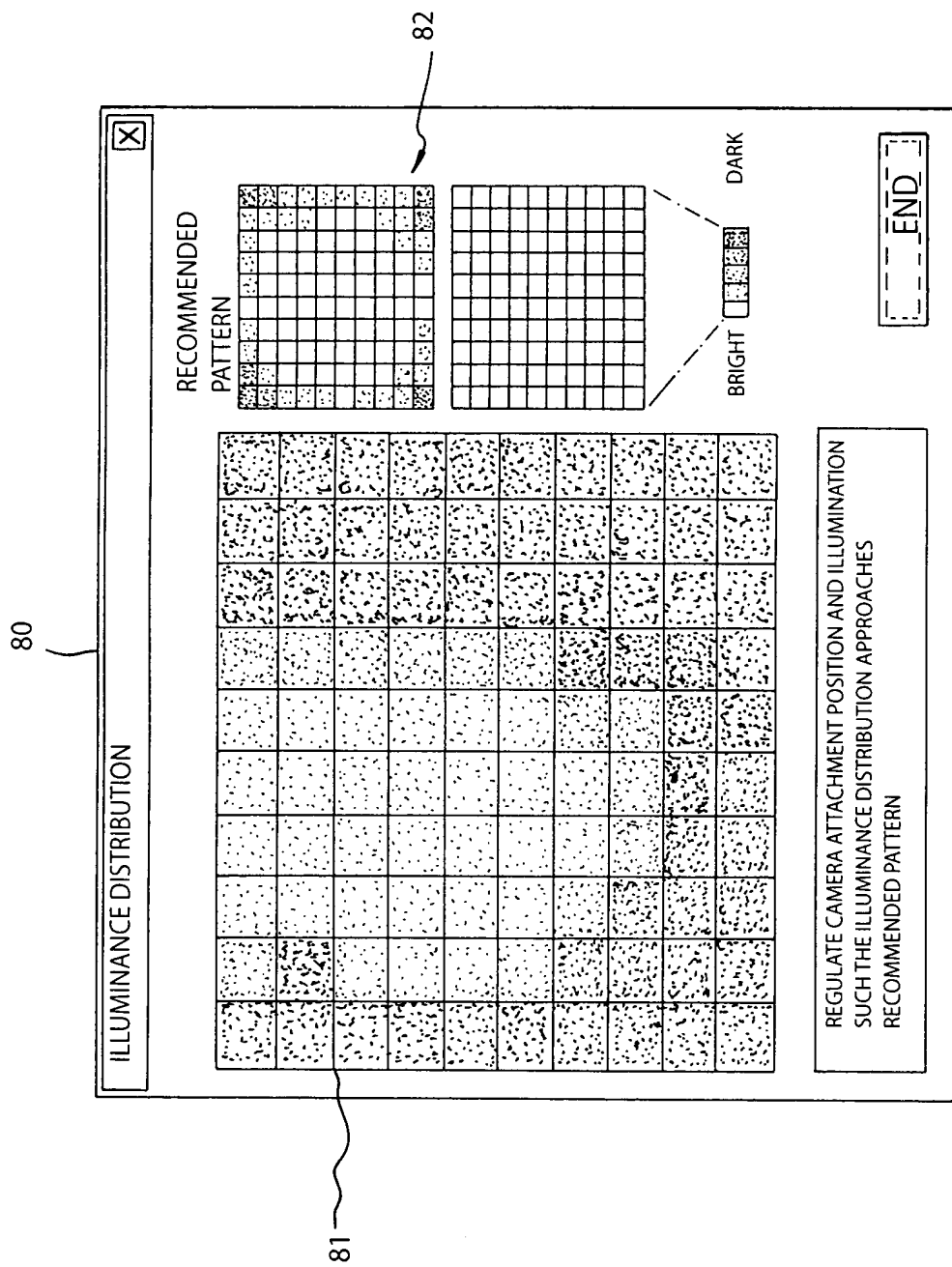


Fig.22

Fig. 23

83

BINARY OPTIONS

THESE SET ITEMS DO NOT NEED TO BE USUALLY CHANGED

84

BINARY MODE

☒ DIVIDED BINARY CHANGE 1

☐ DIVIDED BINARY CHANGE 2

☐ FIX LEVEL

85

FIX BINARY LEVEL: 0 (0-255)

A/D CONVERSION REFERENCE VALUE

UPPER LIMIT: 139 (1-255)

LOWER LIMIT: 23 (0-254)

DIGITAL FILTER SMOOTHING

☒ OFF

☐ ON

SIZE 3

SET DOT PATTERN

☒ AUTOMATIC (RECOMMENDED)

☐ SET

DOT SIZE: 1 (1-30)

GAP SIZE: 1 (1-30)

INITIAL VALUE

OK

CANCEL